APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,404	01/14/2002	Bernard M. Werner	HI03027USU P02017US	2074

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EXAMINER
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ART UNIT	PAPER NUMBER
2614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/046,404	WERNER, BERNARD M.
	Examiner	Art Unit	
	PHYLESHA DABNEY	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 April 2010</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1, 3-7, 11-19, 21-22, 24-28</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This action is in response the Amendment received 20 October 2009 in which claims **1,**

3-7, 11-19, 21-22, 24-28 are pending.

Claim Objections

Claims **25-26** are objected to because of the following informalities: claim dependency is

incorrect. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   Claims **1, 3, 5-7, 11-15, 17-19, 21-22, 24,** and **26-28** are rejected under 35 U.S.C. 102(b)

as being anticipated by Roozen et al (U.S. Patent No. 5892183).

Regarding claim 1, Roozen teaches an acoustic waveguide (base reflex port, 5),

comprising: a first control curve; a second control curve; a third control curve; a fourth control

curve (figs. 2-5, wherein port 5 is a round cross-section having a diameter); and a continuous

three-dimensional surface coincident with the first control curve, the second control curve, the

third control curve and the fourth control curve that <u>intersects</u> a circular throat end (5b)and a

non-elliptical closed control <u>curve</u> that defines a mouth (5c).

Regarding claims 3 and 24, Roozen teaches the acoustic waveguide of claim 1 and 14 respectively, wherein the continuous three- dimensional surface further includes: a minimum surface area axial section plane (5a) of the continuous three-dimensional surface formed from the first control curve, second control curve, third control curve, and fourth control curve.

Regarding claims 5, 18, 21, 27, Roozen teaches the acoustic waveguide of claims 1, 12, 13, 14 respectively, wherein the first control curve is symmetrical about <u>a first</u> axis with the second control curve (figs. 1-5; col. 3 lines 1-21).

Regarding claims 6, 19, 22, 28, Roozen teaches the acoustic waveguide of claims 5, 12, 13, 14 respectively, wherein the third control curve is symmetrical about <u>a second</u> axis with the fourth control curve (figs. 1-5; col. 3 lines 1-21).

Regarding claim 7, it teaches a method corresponding to the apparatus taught in claim 1. The method is inherent in that it simply provides a methodology for the logical implementation found in claim 1.

Regarding claim 11, Roozen teaches the acoustic waveguide of claim 3, where the minimum surface area axial section plane is disposed at a midsection of the <u>acoustic</u> waveguide (M; fig. 1) axially between the circular throat end (5b) and the non-elliptical closed control <u>curve</u> (5c).

Regarding claims 12, 15, Roozen teaches an acoustic waveguide, comprising: a first control curve, a second control curve, a third control curve, and a fourth control curve (figs. 2-5, wherein port 5 is a round cross-section having a diameter); a continuous three-dimensional surface swept about a central axis of the waveguide with minimal discontinuities and coincident with the first control curve, the second control curve, the third control curve and the fourth control curve that intersects a circular throat end (5b) and a non-elliptical closed control curve that defines a mouth (5c).

Regarding claim 13, Roozen teaches an acoustic waveguide, comprising: a first control curve, a second control curve, a third control curve, and a fourth control curve (figs. 2-5, wherein port 5 is a round cross-section having a diameter); and a continuous three-dimensional surface coincident with the first control curve, the second control curve, the third control curve and the fourth control curve that intersect a circular throat end (5b) and a non-elliptical closed control surface that defines a mouth (5c), the continuous three-dimensional surface comprising a minimum surface area axial section plane formed from the first control curve, second control curve, third control curve, and fourth control curve, where the minimum surface area axial section plane is disposed at a midsection of the waveguide (M; fig. 1) axially between the circular throat end and the non-elliptical dosed control surface.

Regarding claim 14, Roozen teaches an acoustic waveguide, comprising: a first control curve; a second control curve; a third control curve; a fourth control curve (figs. 2-5, wherein port 5 is a round cross-section having a diameter); and a continuous three-dimensional surface

coincident with the first control curve, the second control curve, the third control curve and the fourth control curve that <u>intersects</u> a circular throat (5b) end arid a non-elliptical closed control <u>curve</u> that defines a mouth (5c), where each of the first, second, third and fourth control curves is convergent-divergent relative to an axial centerline of the <u>acoustic</u> waveguide (figs. 2-5, wherein port 5 is a round cross-section having convergent-divergent lines relative to the increase and decrease in diameter).

Regarding claim 15, Roozen teaches the acoustic waveguide of claim 12, wherein the continuous three-dimensional surface further includes a minimum surface area axial section plane (M; fig. 1) of the continuous three-dimensional surface formed from the first control curve, second control curve, third control curve, and fourth control curve.

Regarding claims 17 and 26, Roozen teaches the acoustic waveguide of claim 15 and 23 respectively, where the minimum surface area axial section plane is disposed at a midsection of the waveguide (M; fig. 1) axially between the circular throat end and the non-elliptical closed control surface.

2.   Claims **1, 3-7, 12, 14-16, 18-19, 24-25, 27-28** are rejected under 35 U.S.C. 102(b) as being anticipated by Welch et al (U.S. Patent No. 4206831).

Regarding claims 1 and 14, Welch teaches an acoustic waveguide (horn, 26), comprising: a first control curve; a second control curve; a third control curve; a fourth control curve (figs. 2-3, wherein horn 26 is a round cross-section); and a continuous three-dimensional surface coincident with the first control curve, the second control curve, the third control curve and the fourth control curve that intersect a circular throat end (near 20)and a non-elliptical closed control surface that defines a mouth (near numeral 38).

Regarding claim 3 and 24, Welch teaches the acoustic waveguide of claims 1 and 14, wherein the continuous three-dimensional surface further includes: a minimum surface area axial section plane (38) of the continuous three-dimensional surface formed from the first control curve, second control curve, third control curve, and fourth control curve.

Regarding claims 4, 16, and 25, Welch teaches the acoustic waveguide of claims 3, 14 and 15 respectively, wherein the minimum surface area axial section plane is at the circular throat end of the acoustic waveguide (figs. 2-3; near 20).

Regarding claims 5, 18 , 27, Welch teaches the acoustic waveguide of claims 1, 12, 14 respectively, wherein the first control curve is symmetrical about a first axis with the second control curve (figs. 2-3).

Regarding claims 6 and 19, 28, Welch teaches the acoustic waveguide of claims 5, 12, 14 respectively, wherein the third control curve is symmetrical about <u>a second</u> axis with the fourth control curve (figs. 2-3).

Regarding claim 7, it teaches a method corresponding to the apparatus taught in claim 1. The method is inherent in that it simply provides a methodology for the logical implementation found in claim 1.

Regarding claims 12 and 15, Welch teaches an acoustic waveguide, comprising: a first control curve, a second control curve, a third control curve, and a fourth control curve (figs. 2-3, wherein horn 26 is a round cross-section); a continuous three-dimensional surface swept about a central axis of the waveguide with minimal discontinuities and coincident with the first control curve, the second control curve, the third control curve and the fourth control curve that <u>intersects</u> a circular throat end (near 20) and a non-elliptical closed control <u>curve</u> that defines a mouth (near numeral 38).

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

With respect to the Applicant's argument pertaining to claims **1, 3, 5-7, 11-15, 17-19, 21-22, 24,** and **26-28** that Roozen fails to teach a 4 separate and distinct control curves, the Examiner disagrees.

Firstly, "separate and distinct" is not present in the claims nor is it included in the specification.

As per Roozen, control curves (Roozen; port 5, bounding lines 7) resting in the horizontal and vertical plane free of discontinuites, intersect circular throat end (5b) and non-elliptical mouth (5c) which satisfies the claimed language.

With respect to the Applicant's argument pertaining to claims **1, 3-7, 12, 14-16, 18-19, 24-25, 27-28** that Welch fails to teach

Firstly, "separate and distinct" is not present in the claims nor is it included in the specification.

As per Welch, control curves (Welch; figs. 2-3, wherein horn 26 has a rounded cross-section) resting in the horizontal and vertical plane free of discontinuites, intersect circular throat end (near end 20) and non-elliptical mouth (near numeral 38) which satisfies the claimed language.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to PHYLESHA DABNEY whose telephone number is (571)272-

7494. The examiner can normally be reached on Monday through Wednesday and Friday 9:00-

4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
P O Box 1450
Alexandria, VA 22313-1450

Or faxed to:
(703) 273-8300, for formal communications intended for entry and for informal or draft communications, please label "Proposed" or "Draft" when submitting an informal amendment.

Hand-delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 26, 2010

/PHYLESHA DABNEY/
Examiner, Art Unit 2614

/Fan Tsang/
Supervisory Patent Examiner, Art Unit 2614